

KHASENOV, S.; ZHANPEISOV, Ye.; YRYSMAMBEETOV, K.; RAMAZANOV, Ye.;
ABDRAKHMANOV, A., kand. filol. nauk, red.; SEMENOV, M.H.,
red.; RCROKINA, Z.P., tekhn. red.; BEKMUHAMETOVA, S.,
red.; KHUDYAKOV, A.G., tekhn. red.

[Russian-Kazakh dictionary] Russko-kazakhskii terminologicheski
skii slovar'. Alma-Ata, Izd-vo Akad.nauk Kazakhskoi SSR.
Vol.10. [Terms used in railroad transportation] Terminy zhe-
leznodorozhnogo transporta. Pod obshchei red. A.Abdrahmanova.
1962. 160 p. Vol.11. [Botany and soil science] Botanika i
pochvovedenie. 1962. 468 p. (MIRA 15:9)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut yazyko-
znaniya.

(Russian language--Dictionaries--Kazakh)
(Railroads--Terminology) (Soil biology--Terminology)

YESAULOV, F.A.; SHAH, S.S.; SATEKOVA, M., otv. po vypusku;
RAMAZANOV, Ye., red.; LITVINOV, V., tekhn. red.

[Fundamentals of stockbreeding; textbook for students of the
9th grade in rural schools] Mal sharuashylygy negizderi; auy-
selo mektebinin IX klasyna arnalgan oku kuraly. Alma-Ata,
Kazaktyn memleketik oku-pedagogika baspasy, 1960. 197 p.
(MIRA 15:3)

(Stock and stockbreeding)

POKROVSKIY, K.V.; RAMAZANOVA, E.E.

Calculating the condensation isotherm of gas condensate systems.
Izv.vys.ucheb.zav.;neft' i gaz 7 no. 1:80-84 '64. (MIRA 17:7)

1. Azerbaydzhanskiy institut nefti i khimii imeni M.Azizbekova.

POKROVSKIY, K.V.; RAMAZANOVA, E.M.

Determination of the pressure of maximum condensation of hydrocarbon systems in trap rocks. Izv. vysh. ucheb. zav.: neft' i gaz 6 no.341-45 '63. (MIRA 16:7)

1. Azerbaydzhanskiy institut nefti i khimii imeni M.Azizbekova.
(Condensate oil wells)

RAMAZANOVA, K.G.

Glucose regulation in B-cell disease. Compound therapy with
the use of Istita mineral water. Akad. med. zhurn. 40 no.10:
21-23 (1963) (MIRA 1964)

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Clinical X-ray observations of the course of the gastrointestinal
tract long after surgery for cancer. Vor.
... .. (MIRA 18:8)

... ..
... .. (M.Y. Alkhalikov).

LUR'YE, A.M., kand.med.nauk; MAMIKONOV, M.G., kand.med.nauk; RAMAZANOVA, L.A.;
ROZIN, D.L.

Bronchography, tomobronchography and bronchoscopy in the diagnosis
of primary pulmonary cancer. Azerb. med. zhur. no.9:54-61 S '61.

(MIRA 14:9)

1. Iz 'Azerbaydzhanskogo nauchno-issledovatel'skogo instituta rent-
genologii i radiologii (direktor - dotsent M.M.Alikishibekov).

(LUNGS--CANCER)

(BRONCHI--RADIOGRAPHY)

(BRONCHOSCOPY)

RAMAZANOVA, R.A.

Effect of heat insulation of education pipes on pressure losses.
Azerb.neft.khoz. 41 no.5:24-25 My '62. (MIRA 16:2)
(Oil well drilling--Equipment and supplies)
(Insulation (Heat))

KASIMOV, A.F.; RAMAZANOVA, R.A.

Determining bottom pressure in condensate wells. Azerb.neft.
khoz. 41 no.7:22-25 J1 '62. (MIRA 16:2)
(Condensate oil wells)

KNYAZHEVA, V.M.; KOLOTYRKIN, Ya.M.; VEDENEYEVA, M.A.; RAMAZANOVA, N.S.

Use of the potentiostatic method for investigating the inter-
crystalline corrosion of austenite chromium-nickel steels. Khim.
prom. no.5:381-390 My '64. (MIRA 17:9)

RAMAZANOVA, S.M.; SERDOBOL'SKIY, L.A.

Test seismic operations prior to using the controlled directional
method in Tajikistan. Trudy MINKHIGP no.50:86-99 '64
(MIRA 18:2)

PANFILOVA, T.S.; RAMAZANOVA, S.S.

Biology of the pathogens of the verticillium wilt of cotton.
Uzb. biol. zhur. 6 no.1:15-20 '62. (MIRA 15:3)

1. Institut botaniki AN UzSSR.
(COTTON WILT)

RAMAZANOVA, Z.M.

Phase equilibrium constants of the components of a ternary system of the hydrocarbons methane-propane-n-octane. Izv. vys. ucheb. zav.; neft' i gaz 7 no.11:61-63 '64. (MIPA 18:11)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

RAMZANOVA, S.Y.

Experimental investigation of the phase equilibrium of the ternary system of hydrocarbons methane-propane-octane.
Izv. vys. ucheb. zav. neft. i gaz 7 no.9:77-81 '64.

(MIRA 10:12)

1. Azerbaydzhanskiy institut nefti i khimii im. M. G. Salzhbekova.

ROSTOMYAN, P.M.; RAMAZANZADE, M.G.

A factor determining changes in the geothermic depth in oil fields.
Izv. vys. ucheb. zav.; neft' i gaz 3 no.10:21-25 '60.

(MIRA 14:4)

1. Azerbaydzhanskiy institut nefti i khimii imeni M.Azizbekova.
(Apsheron Peninsula---Oil fields---Thermal properties)

RAMAZANZADE, H.G.

Heat conductivity of fluids. Izv. vys. ucheb. zav.; neft' i gaz 7 no.5:
83-84 '64. (MIRA 17:9)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.

L 13084-63

EPF(c)/EWP(j)/BDS/EWT(m) AFFTC/APGC Pr-4/Pc-4

RM/EW/WW/JW/MN

ACCESSION NR: AP3002833

S/0152/63/000/005/0081/0082

AUTHOR: Ramazanade, M. G.

69

TITLE: Dependence of thermal conductivity on the temperature of some petroleum hydrocarbons //✓

SOURCE: IVUZ. Neft' i gaz, no. 5, 1963, 81-82

TOPIC TAGS: thermal conductivity, petroleum hydrocarbon, hydrocarbon, liquid state, speed of sound

ABSTRACT: The study of thermal conductivity of liquids and individual hydrocarbons has a great theoretical meaning in the development of the theory of liquid state. The previously-developed formulas for the calculation of the thermal conductivity of liquids at various temperature are not valid. A new formula has been proposed on the assumption that the speed of sound changes with temperature. Orig. art. has: 3 formulas and 1 table.

ASSOCIATION: Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova (Azerbaydzhani Petroleum and Chemistry Institute)

SUBMITTED: 20Feb63

DATE ACQ: 24Jul63

ENCL: 00

SUB CODE: CH

NO REF SOV: 007

OTHER: 000

Card 1/1

AYAZOV, B.G.

Heat conduction of certain petroleum hydrocarbons as a function
of temperature. Izv. vuz. khim. tekhn. i gaz. din. (1981)
81-82 (6) (MIRA 1/81)

1. Azerbaydzhanetsy institut nefti i khim. imeni M. Gorbakova.

RAMAZANZADE, M.G.; ROSTOMYAN, P.M.

Effect of a change in the energy of oil on local geothermal anomalies in oil fields. Izv. vys. ucheb. zav.; neft' i gaz 3 no.7:15-20 '60. (MIRA 15:5)

1. Azerbaydzhanskiy institut nefti i khimii imeni M. Azizbekova.

(Oil reservoir engineering)

RAMAZANZADE, M.G.; ROSTOMYAN, P.M.

Determining the age of oil by its thermal energy. Izv. vys. ucheb.
zav.: neft' i gaz no.2:19-22 '58. (MIRA 11:8)

1. Azerbaydzhanskiy industrial'nyy institut im. M. Azisbekova.
(Petroleum geology)

RAMAZINI, M.C.

concerning a physical method for determining the oil saturation
of rocks. Lav. vs. sheet. Lav. no. 14017-109 14
(MIRA 18:1)

1958-5-5/35

AUTHOR: ~~Ramazanov~~, P. Ye.

TITLE: Temperature Dependence of the Photo-Dielectric Effect in ZnS-Cu, Fe Phosphor (Temperaturnaya zavisimost' fotodielektricheskogo effekta v ZnS-Cu, Fe fosfore)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, fizika, 1958, Nr 5, pp 22-26 (USSR)

ABSTRACT: The dielectric properties of phosphors have been observed to change significantly under the action of irradiation; this is known as the photo-dielectric effect. The change may persist for a time after removal of the irradiation, although the dielectric permittivity etc. ultimately return to their unirradiated values; the magnitude of the change and the relaxation time are found to depend on the temperature of the phosphor. The present paper describes the results of an extensive and systematic series of measurements on the temperature dependence of the photo-dielectric effect in ZnS-Cu, Fe phosphor, and its interpretation in terms of current semiconductor theory. Measurements were made on a condenser in which the phosphor under investigation formed the dielectric, and across which was applied an electric field alternating at 920 kc/s. Both the change in capacity and the dielectric loss were measured for temperatures ranging from 120 to 440°K and

Card 1/4

SOV/139-58-5-5/35

Temperature Dependence of the Photo-Dielectric Effect in ZnS-Cu, Fe Phosphor

at various intervals after irradiation. The results are presented as curves of $\Delta C/C_0$ and $\Delta \tan \delta$ against temperature, where $\Delta C/C_0$ represents the change in capacity compared to the unirradiated value C_0 and $\Delta \tan \delta$ the corresponding change in the dielectric loss angle δ . The curves of $\Delta C/C_0$ exhibit maxima at around 280°K , and the curves of $\Delta \tan \delta$ exhibit maxima at around 230°K (for the applied frequency of 920 kc/s). In both sets of curves the positions of the maxima are relatively insensitive to the time elapsed since irradiation, although the heights of the maxima depend markedly on this interval. Thus after 20 minutes $\tan \delta$ is half-way back to its unirradiated value, and for C the corresponding 'half-life' is less than 5 minutes. These results are shown to be consistent with current semiconductor theory which expresses macroscopic electrical properties, e.g. conductivity σ , in terms

Card 2/4

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Temperature Dependence of the Photo-Dielectric Effect in ZnS-Cu, Fe Phosphor

of the relative numbers of electrons which are 'free' or 'trapped' in impurity centres. These numbers obey a Boltzmann law and consequently σ must have the form $\sigma \sim \exp(-\epsilon/2kT)$, where ϵ is a measure of the depth of the appropriate energy band, k is Boltzmann's constant and T is absolute temperature. The parameters of the Boltzmann distribution can then be determined by a relation between σ and some measured quantity such as $\Delta \tan \delta$. Thus:

$$\Delta \tan \delta = \frac{\frac{B}{\omega} \sigma}{1 + \frac{L}{\omega^2} \sigma^2} \quad (1)$$

where ω is the angular frequency of the applied electric field, and B and L are known structural constants of the phosphor. The paper contains 3 figures and 6 references;

Card 3/4

SOV/139-58-5-5/35

Temperature Dependence of the Photo-Dielectric Effect in ZnS-Cu, Fe Phosphor

5 of the references are Soviet and 1 is French. The work was first reported at the Conference of Higher Educational Establishments on Dielectrics and Semiconductors, Tomsk, February, 1958.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosuniversitete imeni V. V. Kuybysheva (Siberian Physico-Technical Institute of Tomsk State University imeni V. V. Kuybyshev)

SUBMITTED: March 10, 1958.

Card 4/4

24,7800 (1137, 1138, 1395)

20835
S/023/61/023/003/023/027
3104/3214

AUTHOR: Ramazanov, P. Ye.

TITLE: Dielectric measurements in the ZnS-Cu, Fe phosphor in the case of thermal de-excitation

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 370-371

TEXT: This paper was read at the Ninth Conference on Luminescence (Crystal Phosphors) held in Kiyev from June 20 to June 25, 1960. The changes in capacitance and $\tan \delta$ of a capacitor with a ZnS-Cu, Fe phosphor has been investigated in the case of thermal de-excitation by a method used by the author previously (Ref. 1: Ramazanov, P. Ye., Izv. AN SSSR. Ser. fiz., 23, 1290 (1959)). The thermal de-excitation was carried out after excitation of the phosphor to an equilibrium state followed by damping of the luminescence for 20 minutes at a temperature of T_0 . The changes of $\tan \delta$ and C relative to the dark values were measured along with the intensity I_λ of luminescence. The positions of the maxima for the

Card 1/4

Dielectric measurements ...

20835
S/048/61/025/003/023/047
B104/3214

three curves I_ϕ , $\Delta \tan \delta$, and ΔC for various T_0 are given in Table 1.

It is shown that there is as yet no satisfactory explanation of the temperature dependence of these quantities. An effort is now made to give a qualitative explanation of the temperature dependence of these quantities by starting from the assumption that the photodielectric effect in the phosphor investigated is caused by the oriented external field of the multiply localized electrons. In these considerations it is assumed that only trapping levels with a depth U exist, and so the relations

$$\Delta C \approx \frac{1}{T \left(1 + gT^2 e^{-\frac{U}{kT}} \right) \left(1 + b^2 e^{-\frac{2U}{kT}} \right)} \quad (1)$$

$$\Delta \lg \delta \approx \frac{e^{-\frac{U}{kT}}}{4mT \left(1 + gT^2 e^{-\frac{U}{kT}} \right) \left(1 + b^2 e^{-\frac{2U}{kT}} \right) + a} \quad (2)$$

where

$$a = \frac{n_0 q^2 x^2}{3k}, \quad b = \frac{\omega}{2\nu}, \quad m = \frac{\epsilon_\infty}{4\pi}$$

are obtained. Here, q is the electron charge, x the distance between the electron localizations, ω the angular velocity of the measuring Card 2/4

Dielectric measurements...

20935

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B104/3214

field, ν the eigenfrequency of the localized electrons, and n_0 their concentration at $T = T_0$. The inhomogeneity of the dielectric deforms strongly the functions $\Delta \tan \delta = f(T)$ and $\Delta C(T)$, while the maxima are shifted only slightly in the direction of lower temperatures. Though this does not make it possible to check (1) and (2) experimentally, but it is possible to estimate the eigenfrequency of the localized electrons from the positions of the maxima. Table 1 gives the values of ν determined in this way. These are found to agree well with the value

$\nu = 3 \cdot 10^{12} \text{ sec}^{-1}$ found by the same author earlier from the displacement of the maximum of $\Delta C(T)$ on steady excitation. From the assumptions made above, the depth, U , of the trapping level is found to be 0.3 ev. Thus, the dielectric changes in the phosphor in the case of thermal de-excitation are explained by the mechanism of the photodielectric effect suggested earlier by the same author. In a discussion following the paper, Ye. B. Aleksandrov mentioned the low accuracy of a Q-meter which is highly detrimental to the measurement of the photodielectric effect. He described an experimental arrangement developed by him, which permits the photodielectric effect to be studied as a function of the complex dielectric

Card 3/4

20835

Dielectric measurements...

S/048/61/025/003/023/047
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constant. The arrangement is an a-c bridge circuit, in which the capacitor to be investigated is compared with a balancing capacitor. The arrangement works between acoustic frequency and 20, Mc/sec. There are 1 figure, 1 table, and 3 Soviet-bloc references.

Legend to Table 1:

1) Position of maxima in °K. 2) Eigenfrequency of localized electrons.

T., °K	f, Hz	1 Положения максимумов, °K			2 $\nu \cdot 10^{11}$, см ⁻¹
		I_{ϕ}	$\Delta \lg \delta$	ΔC	
155	$9,02 \cdot 10^4$	206	178	217	3
150	$2,82 \cdot 10^5$	174	189	240	2
157	$2,94 \cdot 10^5$	199	243	258	5
149	$9,69 \cdot 10^4$	197	270	235	5
213	$9,02 \cdot 10^4$	251	223	246	1
210	$2,82 \cdot 10^5$	246	227	258	8
219	$2,04 \cdot 10^6$	252	203	275	7
215	$9,69 \cdot 10^4$	255	268	293	4

Tab. 1

Card 4/4

RAMAZANOV, P. Ya., Cand Phys-Math Sci (diss) -- "The role of capture centers in the photoelectric effect in zinc-sulfide phosphors". Tomsk, 1959. 14 pp (Tomsk State U in V. V. Kuybyshev), 150 copies (RL, No15, 1960, 131)

RAMAZANOV, P.Ye.

Photodielectric effect in the phosphor ZnS--Cu, Fe. Part 1.
Temperature relationships. Izv.vys.ucheb.zav.; fiz. no.3:
9-18 '60. (MIRA 13:7)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom
gosuniversitete im. V.V.Kuybysheva.
(Phosphors--Electric properties)

82321

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E032/E314

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Ramazanov, P.Ye.

AUTHOR:

The Photodielectric Effect in the Phosphor ZnS-Cu,Fe
Temperature Dependence

TITLE:

I. Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, Nr 3, pp 9 - 18 (USSR)

PERIODICAL:

ABSTRACT: The photo-dielectric effect (PDE) is defined as the change in the capacitance and dielectric losses of a capacitor in which a crystal phosphor is used as the dielectric when the latter is irradiated with light. There is no agreement in the literature as to the nature of this effect. Some authors consider (Refs 1,2) that the changes in the dielectric properties of crystal phosphors are associated with the presence of localised electrons, while others (Refs 3,4) ascribe these changes to photo-conductive effects which lead to a change in the capacitance and the dielectric losses owing to the non-homogeneity of the dielectric. Kronenberg and Accardo (Ref 5) and Agashkin (Ref 6) conclude that in some phosphors dielectric changes are present while in others the observed effect is fully explainable in terms of photo-conduction effects. The present author has investigated the effect in ZnS-Cu,Fe (10⁻⁴ g/g; 10⁻⁵)

Card1/4

82327

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E032/E514

The Photo-dielectric Effect in the Phosphor ZnS-Cu,Fe I. Temperature Dependence

in which, according to Agashkin (Ref 7), the PDE can at least partly be explained in terms of localised electrons. The method employed to measure the capacitance and the power factor $\text{tg } \delta$ was similar to that described earlier in Refs 8 and 9. The phosphor was 0.10 mm thick and was in the form of a disc, 20 mm in diameter. It was deposited from acetone on a very thin mica plate. The total thickness of the mica was 0.05 mm. The specimen was placed on the face of a copper rod 2 (Figure 1), which was one of the electrodes. The other electrode was a copper grid 4 pressed against the specimen by a flat piece of quartz glass with the aid of the screws 3. A glass cap was placed on top of the instrument, as shown, and the irradiation and observation of the intensity of the luminescence were carried out through this cap. The temperature of the phosphor was measured with a copper constantan thermocouple. The thermocouple was introduced through the tube 6. The specimen could be heated with the aid of an electric furnace wound on the rod 1. It could be cooled by placing

Card2/4

82327

S/139/60/000/03/002/045

E032/E514

The Photo-dielectric Effect in the Phosphor ZnS-Cu,Fe I. Temperature Dependence

this rod in liquid oxygen. The phosphor could thus be given any temperature between -140 and +250 °C. The temperature could be maintained constant to within ± 1 deg for long intervals of time. The phosphor was excited by a mercury lamp (SVDSH-500) through a filter (UFS-4) with a maximum transmission at 3 600 Å. Figures 2 and 3 show the change in the power factor and the capacitance as a function of temperature for different excitation frequencies. Figures 4 and 5 show the change in the power factor and the capacitance as a function of temperature during the decay of the afterglow. The temperature dependence of the change in the power factor and the capacitance on excitation is shown in Figure 6, and in Figure 7 after 1 min of decay. The effect has a relaxation character and various competing factors contribute to its explanation. A detailed qualitative discussion of the results is given. In the presence of an external field the motion of the electrons which are released from the trapping centres into the conduction band will be guided by the field, and on repeated localisation of

Card3/4

4

RAMAZANOV, P.Ye.

Temperature dependence of the photoelectric effect in ZnS (Cu, Fe)
phosphor. *Izv.vys.ucheb.sav.; fiz. no.5:22-26. ! 58.*

(MIRA 12:1)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom
gosuniversitete imeni V.V. Kiybysheva.
(Phosphors) (Photoelectricity)

RAMAZANOV, P. Ye. (SPTI)

"Conclusions as to the relaxation character of the processes which cause the effect"

Report presented at a Conference on Solid Dielectrics and Semiconductors,
Tomsk Polytechnical Inst., 3-8 Feb. 58.
(Elektrichostvo, '58, No. 7, 83-86)

ARYSTANGALIYEV, S.; RAMAZANOV, Ye.

Materials for a botanical dictionary. Trudy Inst. bot. AN Kazakh. SSR
10:188-256 '61. (MIRA 14:5)

(Botany--Dictionaries)

RAMAZANOVA, Kh.G.

Effect of Istisu mineral water on the bile-secreting function
of the liver in epidemic hepatitis (Botkin's disease). Azerb.
med.zhur. no.2:16-21 F '62. (MIRA 16:4)
(ISTISU--MINERAL WATERS) (BILE) (HEPATITIS, INFECTIOUS)

RAMAZANZADE, M.G.; ROSTOMYAN, P.M.

A physical method for determining the absolute age of sedimentary rocks. Izv. vys. ucheb. zav.; neft' i gaz 2 no.6:11-17 '59.
(MIRA 12:10)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova.
(Rocks, Sedimentary)

RAMAZANZADE, M.G.

Surface tension of metals. Izv. vys. ucheb. zav.; fiz. no.1:
172-173 '59. (MIRA 12:8)
(Metals) (Surface tension)

RAMAZAN-ZADE, M. G.

MELIK-ZADE, Mir-Kyazim Mekhti ogly; ZIZIN, Valentin Grigor'yevich;

~~RAMAZAN-ZADE, M.G.~~, redaktor; SHTEYNGEL', A.S., redaktor
izdatel'stva

[Raman spectra and their use in petroleum analysis] Spektry
kombinatsionnogo rasselaniia sveta i ispol'zovanie ikh v neftie-
nom analize. Baku, Azerbaidzhanskoe gos.izd-vo neft. i nauchno-
tekh.lit-ry, 1956. 174 p. (MIRA 10:9)
(Raman effect) (Petroleum)

RAMAZANOV, K.

Mixed planting of corn varieties differing in their ripening
time. Vest. AN Kazakh. SSR 18 no.10:65-70 0 '62.

(MIRA 17:9)

GLINYANYI, N.P.G., RAMAZANOV, K.

Variability of the Pseudoturcicum 2115 spring wheat produced by
growing conditions. Izv. AN Kazakh.SSR. Ser.biol. no.11:36-50 '56.
(MLRA 10:2)

1. Kafedra botaniki Alma-Atinskogo pedagogicheskogo instituta im.
Abaya.

(ALMA-ATA PROVINCE--WHEAT)

RAMAZANOV, Kh.N. (Alma-Ata)

Role of railroad transport in the economic advances made in Kazakhstan.
Zhel.dor.transp. 39 no.11:27-31 N '57. (MIRA 10:10)

1.Nachal'nik otдела Gosplana Kazakhskoy SSR.
(Kazakhstan--Railroads)

RAMAZANOV, P.

5000

A study of thermal extinction of an orange band of ZnS phosphors with different concentrations of manganese. N. Astanina and P. Ramazanov. *Izvy. Sib. Fiz.-Mat. Nauk.*, 1955, No. 3630. The energy of activation which is necessary for thermal extinction of ZnS-Mn phosphors with Mn concn. of 10-15% this can be explained by the presence of 2 bands in the spectrum—green and orange. Phosphors with 1% Mn have only one band, and the break in the thermal extinction curve can be explained by the appearance of an addnl. extinguishing process with a large concn. of Mn, which requires some amt. of the energy of activation.

Marijole Kestner

SMW
SMP

RAMAZANOV, P.Ye.

Photodielectric effect in ZnS - Cu, Fe phosphor. Izv. vyz. ucheb.
zav.; fiz. no.2:39-43 '58. (MIRA 11:6)
(Phosphors) (Photoelectricity)

RAMAZANOV, P.Ye.

Dielectric changes in the phosphor ZnS - Cu, Fe during photoluminescence. Izv.AN SSSR. Ser. fiz. 25 no.3:370-372 Mar '61.

(Zinc sulfide)

(MIA 142)

RAMAZANOV, R. A. Cand Tech Sci -- (diss) "Certain problems of the study of ^{the} balance driving ~~gear~~^{gears} of depth-pump ~~installations~~^{process}." Baku, 1958. 14 pp
(Min of Higher Education USSR. Azerbaydzhan Order of Labor Red Banner Industrial Inst im M. Azizbekov), 125 copies (KL, 14-58, 114)

RAMAZANOV, R.A.

Reducing weight of flange couplings in gusher fittings [in Azerbaijani
with summary in Russian]. Azerb. neft.khos. 36 no.9:41-43 8 '57.

(MIRA 11:2)

(Oil wells--Equipment and supplies)

KASIMOV, I.F.; RAMAZANOV, R.A.

Method for designing a drilling string for strength under variable loads. Dokl.AN Azerb.SSR 16 no.10:941-944 '60. (MIRA 14:1)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut neftyanogo mashinostroyeniya.

(Boring machinery)

RAMAZANOV, R.A.

Calculating casing strings for internal pressure. Azerb. neft. khor.
39 no.11:29-31 N '60. (MIRA 13:12)
(Oil well casing)

RAMAZANOV, R.A.

An effective method for determining the weight of pump ng jack counterweights [in Azerbaijani with summary in Russian]. Azerb. neft.khoz.36 no.2:36-38 F '57. (MLRA 10:4)

(Oil well pumps)

RAMAZANOV, R.A.

Effective method for determining the moment on the reduction gear
shaft of a pumping jack. Azerb.neft.khoz. 36 no.1:20-22 Ja '57.
(MLRA 10:5)

(Oil well pumps)

3401 RAMAZANOV, R. A. AND KADYROV, N. K.

Neftelromslovyye ekspluatatsionnye mashiny and mekhanizmy. Baku,
aznefteizdat, 1954 296 s. s. ill; 2 l. tabl. 23 sm. 1000 ekz 10 r
50 k V rer Bibliogr S. 292 (25 nazv) Na uzerbaydzh yaz (54-53837) 622.323.
0025 + (016.3)

POLYMBETOVA, F.A. ; RAMAZANOV, Ye.R.

Some problems concerning the origin of plant varieties. Vest.AS
Kazakh.SSR 16 no.11:78-83 N '60. (MIRA 13:12)
(Plants--Varieties)

USSR / Human and Animal Physiology. Internal Secretion. T
The Thyroid Gland.

Abs Jour: Ref Zhur-Biol., No 22, 1958, 101977.

Author : Ramazanova, D. N.

Inst : Dagestan Scientific Research Institute of Agriculture.

Title : Histophysiology of the Thyroid Gland and Metabolism of Energy in the Periods of Sexual Rest and Active Sexual Activity of Sheep.

Orig Pub: Byul. nauchno-issled. inform. Dagestansk. n.-i. in-ta s. kh. 1957, No 1, 50-51.

Abstract: In the period of sexual rest, the function of the thyroid gland (FTG) is decreased, the basal metabolism (BM) decreased in females and increased in yearling ewes. In the period of sexual activity, FTG is increased, BM is insignificantly increased in females and yearling ewes.

Card 1/1

RAMAZANOVA, Kh.G.

Clinical importance of the Kimbarovskii urine color sedimentation method in Botkin's disease. Azerb.med.zhur. no.12:93-96 D '58
(MIRA 12:1)

1. Iz kafedry infektsionnykh bolezney (zav. kafedroy - prof. M.G. Safaralibekov) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta im. N.Narimanova.

(HEPATITIS, INFECTIOUS)

(URINE--ANALYSIS AND PATHOLOGY)

MAKHMUDBEKOVA, L.A.; RAMAZANOVA, Kh.Kh.

Use of vitamin B₁₂ in the treatment of infectious hepatitis. Azerb.
med. zhur. no. 1:16-21 Ja '61. (MIRA 14:2)
(CYANOCOBALAMINE) (HEPATITIS, INFECTIOUS)

MAKIMUDBEKOV, L.A., doktor med.nauk. HAMAZANOVA, Kh.Kh., assistent

Treating Botkin's disease with ACTH. Azerb.med.zhur. no.4:63-66
Ap '58 (MIRA 11:7)

1. Iz kliniki infektsionnykh bolezney (zav.kafedry prof. M.G. Safarlibekov) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta im. N.Narimanova (direktor- zasluzhennyy deyatel' nauk) prof. B.A. Eyvazov).
(HEPATITIS, INFECTIOUS)
(ACTH)

BALASHOV, V.V ; MAYLING, L. ; RAMAZANOVA, L.A. ; SHITIKOVA, K.V. ; YADROVSKIY,
Ye.L.

Characteristics of the photodisintegration of nuclei with unfilled
shells. Izv. AN SSSR. Ser. fiz. 29 no.7:1177-1183 J1 '65. (MIRA 18:7)

ASADOV, I.M.; PIRVERDYAN, A.M.; RAMAZANOVA, R.A.; SHISHCHENKO, R.I.

Effect of viscosity and surface tension on air-lift performance.

Trudy AzNII DN no.6:20-42 '57.

(MIRA 12:12)

(Surface tension) (Viscosity) (Oil fields--Production methods)

KASIMOV, A.F.; MOVSUM-ZADE, S.A.; RAMAZANOVA, R.A.

Determining time required for dewaxing lift wells. Trudy AzNII
DII no.6:43-48 '57. (MIRA 12:12)
(Paraffins)

38346 RAMAZANOV, R. R. AND MITCHKIN, I. N.

K khirurgicheskoy anatomii vnutrenney semennoy arterii. Sbornik trudov
(Arkhiv. vos. med. in-t), vyp. 9, 1949, s. 139-45. - Bibliogr: 14 nazv.

RAMAZANOVA, S. S.: Master Biol Sci (diss) -- "New findings in the biology of the causative agent of blossom mold in clover -- *Botrytis anthophila* Bond". Leningrad, 1958. 16 pp (All-Union Order of Lenin Acad Agric Sci in V. I. Lenin, All-Union Sci Res Inst of Plant Protection), 150 copies (KI, No 10, 1959, 124)

RAMAZANOVA, S.S.

Recent findings in the biology of anther mold (*Botrytis anthophilia*
Bond). Trudy VIZR no.10:153-165 ' 58. (MIRA 12:1)
(Clover--Diseases and pests)

RAMAZANOVA, S.S.

Variability of *Botrytis anthophila* A.Bond., causative agent of
the clover flower mold. Uzb.biol.zhur. no.3:19-24 '58.
(MIRA 11:12)

1. Institut botaniki AN UzSSR.
(Clover--Diseases and pests) (Fungi, Phytopathogenic)

10(5)

AUTHOR: Ramazanade, M.G. SOV/139-59-1-33/34
TITLE: On the Surface Tension of Metals (O poverkhnostno
natyazhenii metallov)
PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika,
1959, Nr 1, pp 172-173 (USSR)

ABSTRACT: Apart from its practical interest, surface tension of metals is also important from the theoretical point of view, since it is related to the liquid structure. Although the number of papers published on the subject is considerable (Refs 1-9) there is still no single point of view on the nature and the variation of the surface tension of metals. A critical analysis of certain formulae is given in Kunin's work (Ref 10). Kunin proposed an empirical formula for the calculation of the surface tension of metals, which involved the Hall constant, electron work function and atomic radius. The present note proposes a different empirical formula which involves easily-measured quantities, such as thermal conductivity. The present author has shown earlier (Ref 11) that the product of the thermal conductivity λ and the atomic volume v_a is a

Card 1/3

On the Surface Tension of Metals

SOV/139-59-1-33/34

constant for elements in the same periodic-table group. Since the surface tension σ varies with the atomic volume (Ref 12), then the relationship

$$\lambda \cdot v_a = \text{const} \quad (1)$$

yields the following formula:

$$\lambda/\sigma = 10^{-4} B \quad (2)$$

where B is a constant for a given group of elements in the periodic table. The value of B varies from 1.1 to 10: for example B = 10 for elements of Group I and B = 1.1 for elements of Group VIII. Using Eq (2) the author calculated the surface tension for a number of metals. The results of these calculations are given in col. 6 of Table 1. These values agree satisfactorily with the experimental values listed in col. 7 of Table 1. Table 2 lists the values of the surface tension σ as calculated by the author (col. 7) and those calculated using formulae proposed by Samoylovich (col. 5) and Zadumkin (col. 6). The experimental values are listed in col. 8 of Table 2. The data of Table 2 show that for the majority of metals the surface tension calculated

Card 2/3

On the Surface Tension of Metals SOV/139-59-1-33/34

from Eq (2) agrees better with the experimental than the values of σ calculated using formulae of other authors.

NOTE: This is an abridged translation.

Card 3/3 There are 2 tables and 14 references, 13 of which are Soviet and 1 German.

ASSOCIATION: Azerbaydzhanskiy Industrial'nyy Institut imeni M. Azizbekova (Azerbaydzhani Industrial Institute imeni M. Azizbekov)

SUBMITTED: April 9, 1958

24(8), 11(4)

AUTHOR:

Ramazanzade, M. G.

SOV/152-59-3-18/25

TITLE:

The Determination of the Molecular Weight of Petroleum
According to the Method of Measuring the Heat Conductivity
(Opredeleniye molekulyarnogo vesa neftey metodom izmereniya
teploprovodnosti)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz,
1959, Nr 3, pp 79-82 (USSR)

ABSTRACT:

The methods most frequently applied to the determination of the
molecular weight are in measuring the reduction of the freezing
point or the increase of the boiling point. In both cases,
apart from the substance to be investigated, also a solvent
is necessary. On determining the heat conductivity no solvent
is necessary. A thin-stratum-method has been developed.
References 8, 9, 10 describe in detail the apparatus and their
working principle. Its most important parts are a central
measuring plate, a guard ring and a condenser. Heating is
performed from above, the liquid is on the one side between
measuring plate and guard ring and measuring plate and
condenser on the other (thickness of the stratum 3-4 mm).
The calculation of the heat conductivity coefficient is

Card 1/2

The Determination of the Molecular Weight of
Petroleum According to the Method of Measuring
the Heat Conductivity

SOV/152-59-3-18/25

carried out according to the formula: $\lambda = D \frac{W}{\Delta t}$ (λ = heat conductivity coefficient, D = apparatus constant, W = the amount of heat transmitted from the hot plate, Δt = the decrease in temperature in the stratum investigated. Measurement is carried out within 20-30 minutes with an accuracy of 98-99%. The apparatus may be used for the permanent control of the molecular weight of petroleum flowing through pipe lines. A change of the molecular weight entails a change in the temperature drop between measuring plate and guard ring, which is indicated by a galvanometer. A. K. Gurova, Assistant to the Chair of Physics carried out the determination of a number of petroleum types. There are 1 figure, 1 table, and 14 Soviet references.

ASSOCIATION: Azerbaydzhanskiy industrial'nyy institut im. M. Azizbekova
(Azerbaydza. Industrial Institute imeni M. Azizbekov)

SUBMITTED: December 15, 1958
Card 2/2

RAMAZANZADE, M. G.

Determination of the internal coefficient of friction of non-transparent liquids. M. G. Ramazanade. *Zavodskaya Lab.* 1953, No. 8, 842-3; *Referat. Zhur., Khim.* 1955, Abstr. No. 65497.—Two coils are slipped over a nonferromagnetic tube at a fixed distance from each other. A magnetic steel ball or a nonferromagnetic ball with a center filled with magnetic alloy falling through the nontransparent liquid causes deflection of a galvanometer at the moment of passing the coils. The velocity of the falling ball is reduced to the detn. of the time interval between the two deflections; the friction coeff. is calcd. according to the Stokes equation. The app. permits measurements at high temps. and pressures (to 600 atm.).
N. Vasilich

3

JK

RAMAZANZADE, M.G.

Handwritten initials

Relation between the heat capacity and atomic volume of metals. M. G. Ramazanade. *Trudy Azerbaidzhan. Ind. Inst. im. Sh. Azizbekova* 1954, No. 8, 110-29. — The product of the heat cond. by the at. vol. for a given group of elements is a const. value. Coeffs. of thermal cond. for several metals with known A.v. relation were calcd. — G. S. M.

2

Handwritten initials
MT

RAMAZANZADE, M.C., dotsent.

Relation between heat generation and atomic volume of metals. Trudy
Azerb. ind. inst. no. 8:119-122 '54. (MIRA 9:10)
(Metals) (Heat) (Atomic volume)

RAMAZANZADE, M.G., dotsent.

Investigating the heat conductivity of boundary layers. Trudy
Azerb. ind. inst. no. 7:57-62 '54. (MIRA 9:9)
(Heat--Conduction) (Boundary layer)

UNZASHVILI, P.A.

Generalist P.M. Pisol'tin's and D.I. Solov'ev's articles. Trud. 1950.
sel'skoykh. no.7:48 J1 '50. (MIRA 1:11)
(Agricultural machinery) (Pisol'tin, P.M.) (Solov'ev, D.I.)

RAMAZASHVILI, R.R.; RUKHADZE, A.A.

Electromagnetic waves in a magnetoactive plasma with a high
refraction coefficient. Zhur.tekh.fiz. 32 no.5:644-647 My
'62. (MIRA 15:7)

1. Fizicheskiy institut imeni P.N.Lebedeva, Moskva.
(Electromagnetic waves) (Plasma (Ionized gases))

L 42438-65 EWT(1)/EPF(n)-2/EWG(m) /EPA(w)-2 Pz-6/Po-4/Pab-10/PI-4 IJP(c)
ACCESSION NR: AP5012041 WW/AT UR/0057/65/035/005/0788/-793

AUTHOR: Ramazashvili, R. R.

TITLE: Nonlinear damping of low frequency plasma waves

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 5, 1965, 788-793

TOPIC TAGES: plasma wave, plasma wave absorption, nonlinear kinetic equation,
damping factor

ABSTRACT: The authors calculate the damping constant (logarithmic decrement) of the low frequency plasma waves in a nonisothermal plasma, which have a phase velocity intermediate between the electron and ion thermal velocities. The calculation is performed for waves of finite amplitude A , but for which eA is much less than T_e , where e is the electron charge and T_e is the electron temperature. Only the kinetic equation for the electron distribution function is considered. The collision integral given by V.P.Silin (ZhETF, 40, 1768, 1961) is employed, in which the effect of the polarization of the medium is taken into account. In its final form this collision integral contains two terms, of which one takes account of close collisions (collision parameter less than the Debye radius) and the

Card 1/2

L 42438-65

ACCESSION NR: AP5012041

2

other describes the collective effects. The kinetic equation for the electron distribution function in the presence of the plasma wave is identical with that used by V.Ye.Zakharov and V.I.Kapman (ZhETF, 43, 490, 1962) in their nonlinear discussion of high frequency plasma waves, and further deductions from it are simply quoted from these authors and adapted to the present problem. It is found that the damping constant for the low frequency plasma waves is proportional to $A^{-3/2}$ and is much less than that given by the linear theory. For $T_e/T_i > 100$. (T_i is the ion temperature), the effect of the collective interactions is greater than that of the two-body collisions. "in conclusion, the authors express their sincere gratitude to A.A.Rukhadze and V.P.Silin for their interest in this work and for valuable advice." Orig. art. has: 32 formulas.

ASSOCIATION: None

SUBMITTED: 10Jul64

ENCL: 00

SUB CODE: ME

NR REF SOV: 009

OTHER: 000

PLS
Card 2/2

RAMAZASHVILI, R.R.; RUKHADZE, A.A.; SILIN, V.P.

Rate of temperature equalization of charged particles in
a plasma. Zhur. eksp. i teor. fiz. 43 no.4:1323-1330
0 '62. (MIRA 15:11)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Plasma (Ionised gases))

L 17133-63 EWT(1)/EWG(k)/BDS/EEC(b)-2/ES(w)-2 AFFTC/ASD/ESD-3/AFWL/
ACCESSION NR: AP3003965 IJP(C)/SSD Pz-4/P1-4/ 8/0057/63/033/007/0390/0892
Po-4/Pab-4

83
79

AUTHOR: Baykov, I.S.; Ramazashvili, R.R.

TITLE: Equalization of the temperature of charged particles in a plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v.33, no.7, 1963, 890-892

TOPIC TAGS: plasma, temperature relaxation

ABSTRACT: The usual expression for the ion-electron temperature relaxation time, derived on the basis of the Maxwellian velocity distribution, does not agree with recent numerical calculations of the energy transfer from hot ions to cold electrons (J.Killen, W.Heckrotte, C.Boer, UCRL-6383, 1961). In the present paper a correction to the formula for the relaxation time is derived with deviations of the electron velocities from the Maxwellian distribution taken into account. The electron distribution function is expressed as the product of a Maxwellian distribution function and a correction factor, and the correction factor is expanded in a series of associated Laguerre polynomials. This corrected distribution function is inserted into the kinetic equation, and a system of differential equations is obtained for the temperatures and the expansion coefficients. The ion temperature is assumed to remain constant, and only the lowest order expansion coefficient is retained in the

Card 1/2

L 17133-63
ACCESSION NR: AP3003965

4

in the correction to the electron distribution function. The resulting differential equation is solved for the electron distribution function with the further assumption that the quantity $m_i T_e / m_e T_i$ is large. An integral occurring in the solution is tabulated. With the aid of the corrected electron distribution function, a corrected equation is obtained for the time derivative of the electron temperature. The corrected electron distribution function indicates the presence of fewer low energy electrons than would be found in a Maxwellian distribution for the same temperature. This is in qualitative agreement with the numerical calculations cited above. "In conclusion, we express our gratitude to A.A.Rukhadze for suggesting the problem and to V.P.Silin and L.M.Kovrizhny*kh for valuable discussions." Orig.art. has: 14 formulas and 1 table.

ASSOCIATION: Fizicheskiy institut im.P.I.Lebedeva, Moscow (Physical Institute)

SUBMITTED: 29Jun62

DATE ACQ: 07Aug63

ENCL: 00

SUB CODE: PH

NO REF SOV: 002

OTHER: 003

Card 2/2

24.6740
24.2120

S/057/62/032/005/021/022
B104/B102

AUTHORS: Ramazashvili, R. R., and Rukhadze, A. A.

TITLE: Electromagnetic waves in a magnetoactive plasma in the range of large refractive indices

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 5, 1962, 644 - 647

TEXT: Dielectric constant and refractive index of ordinary, extra-ordinary, and plasma waves in plasma with a refractive index $Z^\alpha \gg 1$ are studied.

$Z^\alpha = T_\alpha k_\perp^2 / m_\alpha \Omega_\alpha^2$. For $\beta_m^\alpha \ll 1$ the tensor $\epsilon_{ij}(\omega, \vec{k})$ differs very little from δ_{ij} ; the refractive index is about unity. $\beta_m^\alpha = (\omega - m_\alpha \Omega_\alpha) / |k_z| \sqrt{T_\alpha / m_\alpha}$. In the case of $\beta_m^\alpha \gg 1$, $\epsilon_{13} = \epsilon_{23} = 0$,

Card 1/3

S/057/62/032/005/021/022
B104/B102

Electromagnetic waves in ...

$$\epsilon_{22} = 1 - \frac{1}{\sqrt{2\pi}} \frac{\omega_{L_2}^2 \Omega_2}{\omega(\omega - m\Omega_2)} \left(\frac{m_x}{k_1^2 T_a} \right)^{1/2} \left\{ 1 - i \sqrt{\frac{\pi}{2}} \beta_m^2 e^{-\frac{\beta_m^2}{2}} \right\},$$

$$\epsilon_{33} = 1 - \frac{1}{\sqrt{2\pi}} \frac{\omega_{L_3}^2 \Omega_3}{\omega(\omega - m\Omega_3)} \left(\frac{m_x}{k_1^2 T_a} \right)^{1/2} \left\{ 1 - i \sqrt{\frac{\pi}{2}} \beta_m^2 e^{-\frac{\beta_m^2}{2}} \right\}.$$

(4)

The dispersion equation $n^2 \delta_{0j} - n_1 n_j - \epsilon_{ij}(\omega, \vec{k}) = 0$ yields with the help of (4) the equations $n^2 \sin^2 \theta = \epsilon_{33}$, $n^2 = \epsilon_{22}$, $\epsilon_{11} = 0$. The anti-Hermitean part of the tensor is neglected and these equations give in first approximation:

$$\begin{pmatrix} n_1 \\ n_2 \end{pmatrix} = \left(\frac{\omega_{L_2}^2 \Omega_2 c \sqrt{m_x}}{\sqrt{2\pi} T_a \omega^2 (m\Omega_2 - \omega)} \right)^{1/2} \begin{pmatrix} 1 \\ \frac{1}{\sin \theta} \end{pmatrix},$$

$$n_3 = \left(\frac{\omega_{L_3}^2 \Omega_3^3 c^3 m_x^{3/2} m^2}{\sqrt{2\pi} T_a^{3/2} \omega^4 (\omega - m\Omega_3) \sin^3 \theta} \right)^{1/2}.$$

(6)

Card 2/3

Electromagnetic waves in ...

S/057/62/032/005/021/022
B104/B102

Conclusion: For ordinary and extraordinary waves the plasma is transparent when $\omega > m \Omega_{\alpha}$; for plasma waves it is so when $\omega > m \Omega_{\alpha}$. ω is the cyclotron frequency of the electrons and ions, $\Omega_{\alpha} = e_{\alpha} H / m_{\alpha} c$.

ASSOCIATION: Fizicheskii institut im. P. N. Lebedeva, Moskva (Physics Institute imeni P. N. Lebedev, Moscow)

SUBMITTED: October 14, 1961 (initially) , 1961 (initially)
November 20, 1961 (after revision)

Card 3/3

RAMAZAYEV, A.P., inzh.

Ferry with a 70-ton carrying capacity. Sudostroenie 26 no.10:17
0'60. (MIRA 13:10)

(Ferries)

RAMBA, Mircea, ing.

The Hunedoara region constructors at the beginning of
a new year. Constr Buc 16 no.730:3 4 Ja'64.

1. Vicepresedinte al Comitetului executiv al Sfatului popular
al regiunii Hunedoara.

RAMBAH, G.

Study the economy more profoundly . *Fin. SSSR* 19 no.3:40-44 Mr '52.
(MIRA 11:5)

1. Nachal'nik otdela gosdokhodov Leningradskogo gorfinotdela.
(Leningrad Economic Region--Industries)
(Tax collection)

RAMBAM, G.

We are searching for additional income. Fin. SSSR 23 no.9:58-61
S '62. (MIRA 15:9)

1. Nachal'nik otдела gosudarstvennykh dokhodov Leningradskogo
gorodskogo finansovogo otдела.
(Leningrad--Auditing and inspection)

RAMBAM, G.; BLYASHOV, V.; NIKONOV, I.; BOTSUL, G.

For the successful fulfillment of the income plan of the state.
Fin.SSSR 16 no.8:51-58 Ag'55. (MLRA 8:12)

1.Nachal'nik etdela gosdekhedov Leningradskego gorfinetdela (for Rambam) 2.Nachal'nik sektora gosdekhedov Kishinevskogo gorfinetdela (for Blyashov) 3.Nachal'nik etdela gosdekhedov Kostromskogo oblfinetdela (for Nikonov) 4.Starshiy inspektor gosdekhedov Kryzhopol'skogo rayfinetdela Vinnitskey oblasti (for Botsul).
(Revenue)

TOPCHILVA, K.V.; ALBAYEVA, A.L.; SPOZHANIYA, A.A.

Effect of hydrogen chloride on the catalytic properties of aluminum oxide in the reaction of cracking. Vest. Mosk. un. Ser. 2: Khim. 15 no.6:10-14, N-D '60. (MIRA 14:2)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.
(hydrochloric acid) (Alumina)
(Cracking process)

~~20-6-25/47~~

AUTHORS: Topchiyeva, K. V. , Rambayeva, A. M. , and Opitts, G.

TITLE: Hydrochlorination of Acetylene on Aluminum Oxide in the Flux
(Gidrokhlorigovaniye atsetilena na okisi alyuminiya v potoke)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 1010 - 1012 (USSR)

ABSTRACT: The authors shortly describe the use of acetylene in the production of plastics and the two methods of the production of vinylchloride employed in the USA and in Germany (references 1 - 5). The first method, the dehydrochlorination of dichlorethane by an alkaline solution in alcohol is the most economical one. But the great shortcomings of the work with mercury catalysts call for economical mercury-free catalysts. The present report describes the results of a laboratory-investigation of the method described in the title. Vinylchloride was produced from acetylene and hydrogen chloride over aluminum oxide by the flowing-through method at 250-350 C. The addition reaction of these substances was studied in dependence of 1.) a previous treatment of the catalyst with hydrogen chloride, 2.) the dosage of HCl in the initial gas mixture and 3.) the temperature. It was kept in mind that acetylene simultaneously partly decomposes into carbon and hydrogen, while carbon is deposited on the catalyst. Hydrogen was found in the gas mixture in consider-

Card 1/3

20-6-25/47

Hydrochlorination of Acetylene on Aluminum Oxide in the Flux

ably smaller quantities than was calculated from the carbon deposits. Therefore the yield of vinylchloride was determined from a 2-component system: acetylene-vinylchloride. The yield of vinylchloride is mainly dependent on a previous treatment of the catalyst with HCl and on the condition of this treatment (table 1). The tests were made at 300°C. By the HCl-treatment of the catalyst for 3 hours the yield of vinylchloride was increased up to 59%. Table 2 shows the influence of the dosage of HCl in the initial gas mixture. At a small HCl-excess (5,5 %) over the stoichiometrical relation the yield of vinylchloride rapidly increases (59,1 %). Further increase in the quantity of HCl has no effect upon the yield. Just as ineffective remains the more and more increasing quantity of HCl at the catalyst due to an increase in the quantity of HCl in the initial mixture. As the hydrochlorination of acetylene is an exothermic reaction, the selection of the temperature-regime is very important. According to reference 6, 7 the equilibrium of this reaction at room temperature is displaced in the direction of the formation of vinylchloride. With an increase in temperature due to the formation of heat during the reaction the equilibrium is displaced to the left. But the equilibrium constant between 250 and 350°C is still high enough. It was in this range that the dependence of the formation of vinylchloride on the tem-

Card 2/3

20-6-25/47

Hydrochlorination of Acetylene on Aluminum Oxide in the Flux

perature was studied (figure 1, 1). The modification of the carbon deposits at the catalyst were also studied in the same range. The yield of vinylchloride increases with increasing temperature. The highest yield ($\sim 70\%$) lies between 300 and 320°C and decreases at 350°C . The activity of the catalyst at the given parameters remained constant, for 4 hours. There are 2 figures, 1 table, and 6 references, 4 of which are Slavic.

ASSOCIATION:

Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

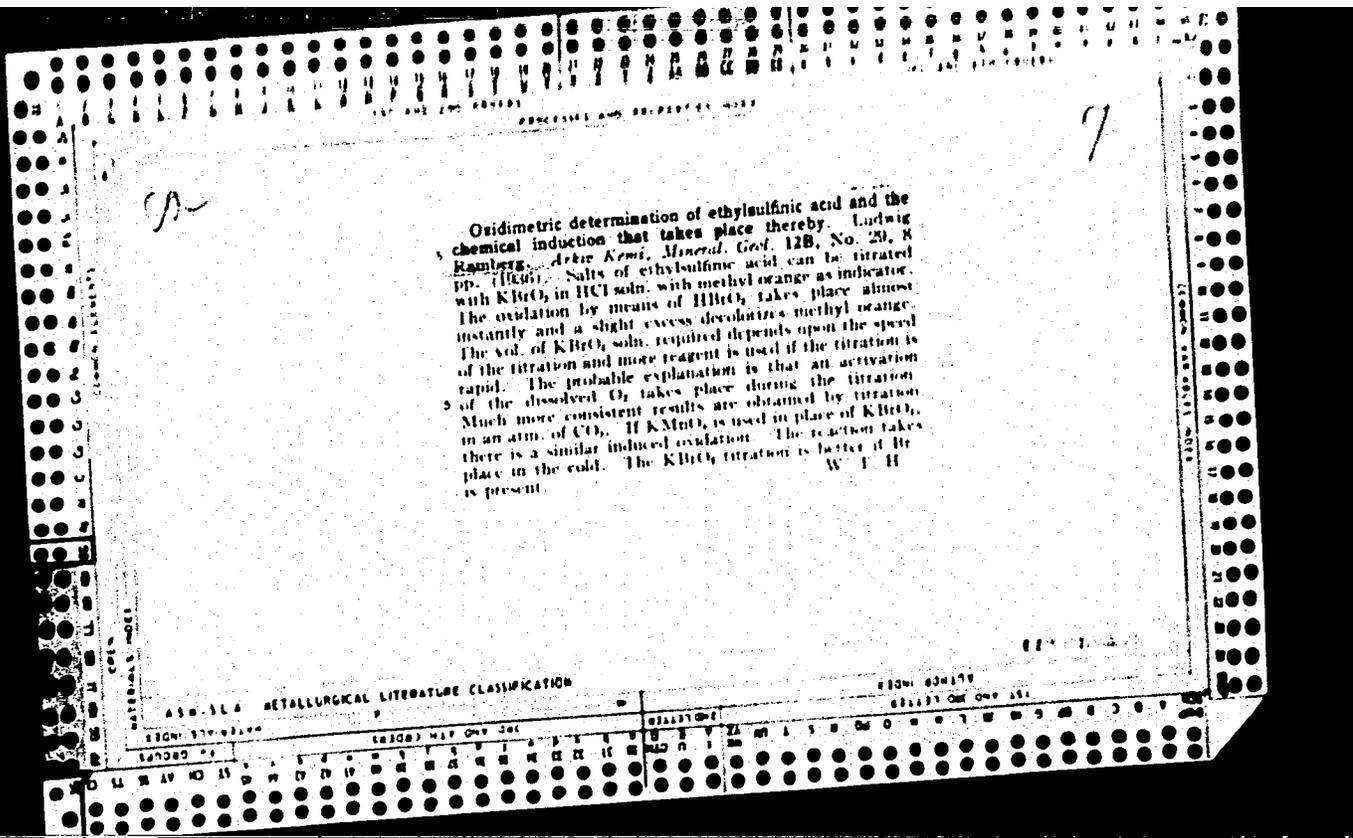
PRESENTED: July 18, 1957, by S. I. Vol'fkovich, Academician

SUBMITTED: July 18, 1957

AVAILABLE: Library of Congress

Card 3/3

Resolution of optically active α -phenylacetyl-
phenylpropionic acid. I. KAWAZUMI and I. HIRI-
UCHI (Arkiv Kemi, Min. Geol., 1939, 13, A, No. 1,
26 pp).—Measurements of the rate of racemization
are described, and k data for (S)-PhSO₂-CHMe-CH₂H
(I) in various aq. media at 25° are recorded and dis-
cussed; E vals. are deduced from measurements at
35°. A strong anion effect is observed in aq.
solutions, k showing a linear decrease with increasing
acid concn. over limited ranges: (HCl 0.1–1.0), HBr
0.1–1.2, HClO₄ 0.05–0.5%; in presence of salts
with a common anion the k vals. are only slightly
those for acids of equiv. anion concn., the nature of
the cation having little effect. The effectiveness of
the anions studied decreases in the order ClO₄ > I,
(Br⁻, NO₃⁻), Cl⁻. The kinetic results do not dif-
ferentiate between base catalysis of racemization of
undissociated (I) and acid catalysis acting on the anion,
but the former mechanism is preferred owing to the
potentially acidic character of (I); activity effects
are considered in detail. A base catalytic effect of
H₂O, acting on both the undissociated mol. and its
anion, accounts for the k changes on addition of non-
electrolytes of the [I], and partial neutral-
ization of the (I). In neutral solution the effect of
OH⁻ predominates. Vals. of the rate constants for the
four processes are compared. A. J. E. W.



RAMBEZ, Ivan Nikolayevich; SEMAN, Valeriya Sergeevna;
PETRUS, Y.S., eds., osv. red.

[Prevention and treatment of obstetric hemorrhages;
abstracts of lectures] Profilaktika i lechenie pri
akusherskikh krovotcheniyakh; konspekty lektsii. Uzh-
gorod, Gos. univ., 1964. 126 p. (MIRA 18:5)

KOVAL'SKIY, V.V.; RAMBIDI, M.I.

Effect of cobalt on carbohydrate metabolism in sheep. Dokl.
Akad.sel'khoz. 23 no.11:29-33 '58. (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva.
2. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Koval'skiy).
(Sheep) (Carbohydrate metabolism)

RAMBIDI, N. G.

"The 'washing-out' effect in high-temperature electron diffraction by gases."
report submitted for 6th Gen Assembly, Intl Union of Crystallography, Rome,
9 Sep 63.

Chemical Dept, Moscow State Univ.

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